NON-PUBLIC?: N
ACCESSION #: 8802090542
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Maine Yankee Atomic Power Company PAGE: 1 of 2

DOCKET NUMBER: 05000309

TITLE: Plant Trip On Heater Drain Tank Level Switch Failure
EVENT DATE: 01/05/88 LER #: 88-001-00 REPORT DATE: 02/05/88

OPERATING MODE: 7 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Ethan B. Brand, Nuclear Safety Engineer TELEPHONE #: 207-882-6321

COMPONENT FAILURE DESCRIPTION:
CAUSE: X SYSTEM: SJ COMPONENT: LS MANUFACTURER: J057
REPORTABLE TO NPRDS: Y

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT: On January 5, 1988, an unscheduled reactor trip occurred on Loss of Load due to a main turbine trip. The main turbine tripped automatically when the turbine driven main feedwater pump tripped on low suction pressure.

The low turbine-driven feedwater pump suction pressure was the result of loss of flow from the Heater Drain Pumps. The operating Heater Drain Pump was tripped and its standby pump was prevented from starting because the Heater Drain Tank low level switch failed.

The low level switch failure was due to corrosion of the switch float, which leaked and sank, locking in a low Heater Drain Tank level signal. The low level switch and float was replaced on January 5, 1988.

(End of Abstract)

TEXT: PAGE: 2 of 2

On January 5, 1988, the plant was operating at 100% power. At 0253, an

unscheduled reactor (RCT) trip occurred due to a trip of the turbine-driven main feedwater (SJ) pump (P), P-2C, on low suction pressure. The running Heater Drain (SN) Pump had tripped due to a failure of the Heater Drain Tank (TK) low level switch (LS) float, Jo-Bell model CB-300STD. This reduced flow to the main feedwater pump, producing a low suction pressure condition. While at 100% power, two Condensate Pumps and at least one Heater Drain Pump are needed to maintain sufficient suction pressure for the turbine-driven main feedwater pump.

Fifty-three seconds prior to the unit trip, Control Room operators noted alarms for 4KV motor auto trip due to the Heater Drain Pump trip and low P-2C suction pressure. The reactor operator observed that the running Heater Drain Pump had tripped and was subsequently unable to start the standby pump. The turbine-driven feed pump tripped after the nominal 50 second delay for a low suction pressure condition.

The P-2C trip automatically caused a main turbine (TRB) trip; the Reactor Protective System (JC) tripped the reactor on Loss of Load. Post trip system parameters were normal and plant equipment responded properly.

The Heater Drain Tank low level switch float had leaked, filled with water and sunk, causing a low Heater Drain Tank level signal. The signal tripped the running Heater Drain Pump and prevented the standby pump from starting. The float sank as a result of thru wall corrosion. The float and magnetic switch were replaced and the Heater Drain Tank was returned to service on January 5, 1988.

Maine Yankee has compiled a list of all Jo-Bell, float type, level switches which have control functions. By August 5, 1988, these level switches will be entered into the Maine Yankee Preventive Maintenance Program.

ATTACHMENT # 1 TO ANO # 8802090542 PAGE: 1 of 1

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10 CFR 50.73
GDW-88-27

February 5, 1988
MN-88-12

United States Nuclear Regulatory Commission

Attention: Document Control Desk
Washington, D.C. 20555

References: (a) License No. DPR-36 (Docket No. 50-309)

Subject: Maine Yankee Licensee Event Report 88-001-00 - Plant Trip on Heater Drain Tank Level Switch Failure

Gentlemen:

Please find enclosed Maine Yankee Licensee Event Report 88-001-00. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(iv).

Very truly yours,
MAINE YANKEE
/s/ for
G. D. Whittier, Manager
Nuclear Engineering and
Licensing

GDW/bjp
Enclosure
cc: Mr. Richard H. Wessman
Mr. William T. Russell
Mr. Pat Sears
Mr. Cornelius F. Holden
American Nuclear Insurers

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